

IN THE CLAIMS:

1. (Currently amended) A spine stabilization system, comprising:
an implant having a first end and an opposite second end, at least a portion of one of said first and second ends structured for positioning in use in a tunnel formed in a first vertebral body;
and

at least one anchor sized to be embedded within ~~engageable to~~ the first vertebral body without protruding from the first vertebral body for attaching said at least a portion of said one of said first and second ends of said implant to the first vertebral body when positioned in the tunnel with said implant extending extradiscally to a second vertebral body.

2. (Currently amended) The system of claim 1, wherein said at least one anchor extends along and threadingly engages said one of said first and second ends of said implant. ~~is embeddable in the tunnel.~~

3. (Previously presented) The system of claim 1, wherein the other of said first and second ends of said implant is structured for positioning in a second tunnel formed in the second vertebral body and further comprising a second anchor engageable to the second vertebral body for attaching said implant to the second vertebral body.

4. (Previously presented) The system of claim 3, further comprising a device positionable in a spinal disc space between the first vertebral body and the second vertebral body.

5. (Previously presented) The system of claim 1, wherein the tunnel forms an angle relative to an axial plane of the spinal column in the range of 0 degrees to 80 degrees.

6. (Original) The system of claim 5, wherein said angle is in the range of about 25 degrees to about 65 degrees.

7. (Original) The system of claim 1, wherein said at least one anchor is selected from the group consisting of: an interference screw, a suture anchor, a button, a spiked washer, and a pin fastener.

8. (Withdrawn- currently amended) The system of claim 3, wherein said implant is flexible. ~~an artificial ligament.~~

9. (Withdrawn-currently amended) The system of claim 8, wherein said ~~implant~~artificial ligament extends along the anterior faces of the first vertebral body and the second vertebral body when attached thereto.

10. (Withdrawn-currently amended) The system of claim 8, wherein said ~~implant~~artificial ligament extends along the lateral faces of the first vertebral body and the second vertebral body when attached thereto.

11. (Withdrawn-currently amended) The system of claim 8, wherein said ~~implant~~artificial ligament extends between a pedicle of the first vertebral body and a pedicle of the second vertebral body when attached thereto.

12. (Withdrawn-currently amended) The system of claim 8, wherein said ~~implant~~artificial ligament comprises a synthetic resorbable material selected from the group consisting of: polylactide, polyglycolide, tyrosine-derived polycarbonate, polyanhydride, polyorthoester, polyphosphazene, calcium phosphate, hydroxyapatite, bioactive glass and combinations thereof.

13. (Withdrawn-currently amended) The system of claim 8, wherein said ~~implant~~artificial ligament comprises a natural resorbable material selected from the group consisting of: autograft, allograft, xenograft, soft tissues, connective tissues, demineralized bone matrix, and combinations thereof.

14. (Withdrawn-currently amended) The system of claim 8, wherein said ~~implant~~~~artificial ligament~~ comprises a nonresorbable material selected from the group consisting of: polyethylene, polyester, polyvinyl alcohol, polyacrylonitrile, polyamide, polytetrafluorethylene, poly-paraphenylene terephthalamide, cellulose, shape-memory alloys, titanium, titanium alloys, stainless steel, and combinations thereof.

15. (Withdrawn-currently amended) The system of claim 1, wherein said at least one anchor is ~~positionable~~~~positioned~~ in a second tunnel that intersects the tunnel in which said one end of said implant is positioned.

16. (Withdrawn) The system of claim 15, wherein the tunnel extends from an anterior face of the first vertebral body and the second tunnel extends from a lateral face of the first vertebral body.

17. (Withdrawn) The system of claim 15, wherein the tunnel extends from an anterior face of the first vertebral body and the second tunnel extends from an antero-lateral face of the first vertebral body.

18. (Withdrawn) The system of claim 17, wherein the tunnel is curved toward the second tunnel and the second tunnel extends obliquely relative to the saggital plane.

19. (Withdrawn) The system of claim 15, wherein:
the tunnel extends from an anterior face of the first vertebral body adjacent one vertebral endplate at a first angle relative to the axial plane of the spinal column; and
the second tunnel extends from the anterior face of the first vertebral body adjacent the other endplate at a second angle relative to the axial plane of the spinal column.

20. (Withdrawn) The system of claim 19, wherein said first angle and said second angle are equal.

21. (Withdrawn-currently amended) The system of claim 1, wherein:

the tunnel extends through the first vertebral body from a first opening adjacent one endplate of the first vertebral body to a second opening adjacent the other endplate of the first vertebral body; and

said one end of said implant is positionable~~extends~~ from the first opening through the tunnel and for attachment~~is attached~~ to the first vertebral body at the second opening with said at least one anchor.

Claim 22 (Cancelled)

23. (Withdrawn) The system of claim 21, wherein said first opening opens at the one vertebral endplate.

24. (Withdrawn-currently amended) The system of claim 1, further comprising:

a second implant having a first end and an opposite second end, at least a portion of said first and second ends of the second implant being positionable~~positioned~~ in a second tunnel formed in the first vertebral body; and

a second anchor engageable~~engaged~~ to the first vertebral body for attaching said second implant to the first vertebral body.

25. (Withdrawn-currently amended) The system of claim 24, wherein:

said implant is attachable~~attached~~ along the anterior face of the first vertebral body on one side of the sagittal plane; and

said second implant is attachable~~attached~~ along the anterior face of the first vertebral body on the other side of the sagittal plane.

26. (Withdrawn-currently amended) The system of claim 24, wherein:

at least a portion of the other of said first and second ends of said implant is

~~positionablepositioned~~ in a third tunnel formed in a second vertebral body and further comprising a third anchor for attaching said implant to the second vertebra; and

at least a portion of the other of said first and second ends of said second implant is ~~positionablepositioned~~ in a fourth tunnel formed in the second vertebral body and further comprising a fourth anchor for attaching said second implant to the second vertebra.

27. (Withdrawn) The system of claim 26, wherein said implant and said second implant are parallel to one another.

28. (Withdrawn) The system of claim 26, wherein said implant and said second implant cross over one another.

29. (Withdrawn-currently amended) The system of claim 26, wherein each of said at least one anchor, said second anchor, said third anchor and said fourth anchor are interference screws ~~positionableposition~~ in respective ones of the tunnel, the second tunnel, the third tunnel, and the fourth tunnel in engagement with the respective ends of said implant and said second implant.

30. (Withdrawn-currently amended) The system of claim 1, further comprising:
a second tunnel formed in the first vertebral body and spaced from the tunnel;
a third tunnel extending through a second vertebral body from a first opening adjacent one endplate of the second vertebral body to a second opening adjacent the one endplate of the second vertebral body, wherein said implant is ~~positionableextends~~ through the third tunnel and at least a portion of the other of said first and second ends is ~~positionablepositioned~~ in the second tunnel, and further comprising a second anchor ~~engageableengaged~~ to the first vertebral body for attaching said other end of said implant to the first vertebral body.

31. (Withdrawn-currently amended) The system of claim 1, wherein the tunnel extends between a first opening adjacent an endplate of the first vertebral body and a second opening adjacent the endplate of the first vertebral body, and further comprising a second tunnel

extending through a second vertebral body from a third opening adjacent one endplate of the second vertebral body to a fourth opening adjacent the one endplate of the second vertebral body, wherein said implant is positionable~~extends~~ through the second tunnel and the other of said first and second ends is positionable~~extends~~ into the first tunnel and overlaps said one end of said implant when attached to the first vertebral body.

Claim 32 (Cancelled)

33. (Original) The system of claim 1, wherein said at least one anchor extends along said one end of said implant.

34. (Withdrawn) The system of claim 1, wherein said at least one anchor intersects said one end of said implant.

35. (Original) The system of claim 1, wherein said at least one anchor is attached to said one end of said implant.

36. (Withdrawn) The system of claim 1, further comprising a second tunnel formed in the first vertebral body spaced from the tunnel, and wherein said one end of said implant has a second portion positionable in the second tunnel and attached thereto with a second anchor engaged to the first vertebral body.

37. (Withdrawn) The system of claim 1, wherein said implant comprises a substantially inelastic material.

38. (Original) The system of claim 1, wherein said implant comprises a substantially flexible material.

Claims 39-77 (Cancelled)

78. (Currently amended) A spine stabilization system, comprising:
an implant having a first end and an opposite second end, at least ~~a portion of one of said~~
first and second ends being positionable in a tunnel formed in a first vertebral body; and
at least one anchor engageable to the first vertebral body for attaching said one of said
first and second ends of said implant to the first vertebral body, wherein said implant includes a
portion between said first and second ends sized to extend from the first vertebral body to a
second vertebral body, when in the tunnel said one of said first and second ends of said implant
being angled relative to said portion for positioning into the first vertebral body in the
tunnel, extends along an angle relative to an axial plane of the spinal column in the range of about
~~0 degrees to about 80 degrees.~~

79. (Currently amended) The system of claim 78, wherein said at least one anchor is
sized to not protrude from the first vertebral body when said at least one anchor is embeddable in
~~the tunnel~~ in engagement with said one of said first and second ends.

80. (Currently amended) The system of claim 78, wherein the other of said first and
second ends of said implant is positionable in a second tunnel formed in the second ~~a second~~
vertebral body and further comprising a second anchor engageable to the second vertebral body
in the tunnel for attaching said implant to the second vertebral body, wherein said at least one
anchor and said second anchor are each sized to not protrude from the respective vertebral bodies
when positioned therein in engagement with said implant.

81. (Currently amended) The system of claim 80, wherein ~~when in the second tunnel the~~
~~other of the first and second ends~~ extend in opposite directions from one another and are angled
relative to said portion such that when engaged to the respective vertebral bodies the first and
second ends each form an angle ranging from about 0 degrees to about 80 degrees relative to an
axial plane taken at an entry location of the respective first and second ends into the respective
vertebral body. ~~extends in a direction opposite the one of the first and second ends in the tunnel~~
~~at an angle relative to the axial plane of the spinal column in the range of about 0 degrees to~~

~~about 80 degrees, the angles of the first and second ends being measured from an axial plane between the vertebral bodies.~~

82. (Previously presented) The system of claim 81, wherein said angles are in the range of about 25 degrees to about 65 degrees.

83. (Previously presented) The system of claim 80, further comprising a device positionable in a spinal disc space between the first vertebral body and the second vertebral body.

84. (Previously presented) The system of claim 80, wherein said at least one anchor is selected from the group consisting of: an interference screw, a suture anchor, a button, a spiked washer, and a pin fastener.

85. (Withdrawn-currently amended) The system of claim 80, wherein said implant is flexible~~an artificial ligament~~.

86. (Withdrawn-currently amended) The system of claim 85, wherein said implant extends along and is conformable to~~artificial ligament extends along~~ anterior faces of the first vertebral body and the second vertebral body when positioned in the tunnels.

87. (Previously presented) The system of claim 78, wherein said at least one anchor extends along said one of said first and second ends of said implant when engaged thereto.

88. (Previously presented) The system of claim 78, wherein said at least one anchor is attached to said one of said first and second ends of said implant.

89. (Withdrawn) The system of claim 78, wherein said implant comprises a substantially inelastic material.

90. (Previously presented) The system of claim 78, wherein said implant comprises a substantially flexible material.

91. (Currently amended) A spine stabilization system, comprising:
an implant having a flexible, conformable body extending between a first end and an opposite second end, at least a portion of one of said first and second ends including means for conforming to a first vertebral body ~~being adapted for positioning~~ in a tunnel formed in a first vertebral body; and

at least one anchor engageable to the first vertebral body for attaching said one of said first and second ends of said implant to the first vertebral body, ~~wherein when in the tunnel, said at least one anchor and said one of said first and second ends being configured to engage one another in the tunnel with said means for conforming in contact with the first vertebral body. said one of said first and second ends and said at least one anchor extending therealong form an acute angle relative to an axial plane of the spinal column and said at least one anchor is positionable in the tunnel in engagement with the respective end of the implant.~~

92. (Currently amended) The system of claim 91, wherein said one of said first and second ends and said at least one anchor form an acute angle relative to an axial plane of the spinal column when engaged to the first vertebral body, wherein said angle is in the range of about 25 degrees to about 65 degrees.

93. (Previously presented) The system of claim 91, wherein the other of said first and second ends of said implant is positionable in a second tunnel formed in a second vertebral body and further comprising a second anchor engageable to the second vertebral body for attaching said implant to the second vertebral body.

94. (Currently amended) The system of claim 93, wherein when in the respective tunnels ~~each of second tunnel the other of~~ said first and second ends of said implant extends in a

direction opposite ~~one another and the one of the first and second ends in the tunnel and said other of said first and second ends extends~~ at an acute angle relative to ~~the axial plane of the spinal column, the angles of the first and second ends being measured from an axial plane of the spinal column taken~~ between the vertebral bodies.

95. (Previously presented) The system of claim 94, wherein the angle of the first and second ends relative to the axial plane is in the range from about 25 degrees to about 65 degrees.

96. (Previously presented) The system of claim 93, further comprising a device positionable in a spinal disc space between the first vertebral body and the second vertebral body.

97. (Previously presented) The system of claim 93, wherein said body is structured for positioning on anterior faces of the first vertebral body and the second vertebral body when said first and second ends are positioned in respective ones of said tunnels.

98. (New) The system of claim 91, wherein said at least one anchor extends along and threadingly engages said one of said first and second ends of said implant.

99. (New) The system of claim 78, wherein said at least one anchor extends along and threadingly engages said one of said first and second ends of said implant.